

Task Group 11: Evaluating and integrating DOE and CDPHE monitoring and sampling systems and activities

Agreement:

- 1) DOE and CDPHE have agreed to a process for integrating monitoring programs using a data quality objectives (DQO) approach to monitoring. This will become an ongoing process.
- 2) All involved parties (DOE, contractors, CDPHE, Westminster, Broomfield, USGS) have undergone a standardized DQO training.
- 3) In December and January, monitoring programs integrated within each agency (one for the site, one for CDPHE) will be shared with the other monitoring parties for review.
- 4) By July 1, 1996 monitoring programs will be integrated.
- 5) During FY96, data management systems will be integrated to allow access to data by all parties.
- 6) During steps 3 and 4 above, involvement will be sought from interested members of the public and local governments.



PART 28 SAMPLING AND DATA/DOCUMENT AVAILABILITY

It is the goal of the parties to develop and maintain an effective and efficient monitoring system for RFETS. This system includes both monitoring programs and data management systems. The monitoring system shall provide information for remediating the site, assuring public safety, and informing the public about emissions from the site. The system will minimize duplicative efforts. The long range goal is to integrate all environmental and natural resource monitoring.

160 DOE shall make available to EPA and the State results of sampling, tests, or other data generated by DOE or on its behalf, with respect to the implementation of this Agreement as specified in the integrated monitoring plan or appropriate sampling & analysis plan. If quality assurance is not completed within the time frames specified in the IMP and subsequent S&A Ps, raw data or results shall be submitted upon the request of EPA or the State. In addition, quality assured data or results shall be submitted as soon as they become available.

161 In consultation with the State & EPA, DOE shall to establish an Integrated Monitoring Program that effectively collects and reports the data required to ensure the protection of human health and the environment, compliance with this Agreement, laws and regulation and the effective management of the Site's resources. The Integrated Monitoring Plan (IMP) will be jointly evaluated on an annual basis consistent with time frame established in Part 12 for adequacy, based on previous monitoring results, changed conditions, planned activities and public input. Changes to the IMP will be made with the approval of EPA and the State. Disagreements regarding any modifications to the IMP will be subject to the Dispute Resolution Process described in Part . [does this work?]

162 no change to existing paragraph

DOE shall create with the State & EPA a data management system that facilitates the sharing, analysis and interpretation of Site-related monitoring data collected by any party. By the end of FY96, the data management system will be operational.

Mission: To develop an integrated monitoring, sampling and reporting information management plan by December 1, 1995.

Integrated Multi-Media Monitoring Plan

Background

One of the greatest cost drivers for environmental protection and environmental restoration programs at many DOE sites, including the Rocky Flats Technology site (RFETS), is the cost of sampling and analysis activities. These activities are conducted to make environmental management decisions and to comply with a myriad of Federal and State regulations and DOE orders. In these days of severe budget cuts, RFETS, as well as oversight agencies (i.e., CDPH&E) and adjacent communities (i.e., the Cities of Broomfield and Westminster), cannot continue to have separate and often duplicative sampling and analysis activities for their environmental protection and environmental restoration programs.

RFETS has begun to evaluate and revise ongoing surface water, stormwater run-off, ground water, ecological and air monitoring programs. The objective of the revisions that have been implemented to date has been to drastically reduce the monitoring efforts to be in line with recent, and anticipated future, budget cuts, while still meeting the current permit requirements of RCRA, CWA, CAA, NEPA, State regulations, and DOE Orders 5400.1 and 5400.5 (and their replacement when finalized). However, final programs must be based on a clear, decision-based and integrated rationale to provide a defensible basis for these reductions.

Overview

The primary objective of the Integrated Multi-Media Monitoring Plan is to develop an overall, multi-media, integrated decision logic for monitoring, and to facilitate the application of the Data Quality Objective (DQO) process to identify program decisions and to determine the data needs for each of these key decisions. The process will encourage thoughtful consideration, in a structured manner, about why data are needed and how data will be used in decision-making. The process ultimately leads to the development of the necessary sampling and analysis and quality assurance plans. The process involves the following seven generic steps:

- State the problem to be resolved
- Identify the decision
- Identify the inputs to the decision
- Define the study boundaries
- Develop a decision rule
- Specify limits on decision errors
- Develop and optimize the design for obtaining data.

Because of this collaborative process, RFETS will be in a better position to negotiate changes with regulators and withstand anticipated stakeholder scrutiny of its reduced monitoring efforts. In addition, RFETS, CDPH&E, Broomfield and Westminster will be in a better position to cost-effectively provide for the protection of the environment by designing sampling and analysis activities with a view to the environment as a whole rather than the media-specific perspective that grew out of the way in which regulations were written.

This plan identifies the goals and objectives of integrated, multi-media monitoring; establishes a related policy, and lists key steps in developing integrated programs. Milestones are also identified.

Goals and Objective

- To develop and implement a cost-effective and defensible RFETS environmental monitoring program that is based on specified data quality objectives (DQOs) and acceptable to all stakeholders.
- To integrate all environmental monitoring activities conducted by DOE and its subcontractor, CDPH&E, and the Cities of Broomfield and Westminster (to integrate the activities of all parties across all media and applicable regulatory programs). Environmental media include surface water, ground water, wastewater discharges, stack emissions, ambient air, soil and sediment, and flora and fauna.
- To reduce unnecessary and overlapping monitoring activities and expenditures and to maximize use of limited government/tax-payer resources.
- To ensure that all data meet quality expectations and are easily accessible in a timely manner via integrated data management systems. Quality will be ensured through data verification, data validation, and data quality assessment.

Program Policy

DOE, K-H and its subcontractors will develop, implement and maintain an integrated, multi-media environmental monitoring program to make environmental management decisions and to comply with a myriad of Federal and State regulations and DOE orders. The monitoring program will cover all appropriate media (i.e., surface water, ground water, wastewater discharges, stack emissions, ambient air, soil and sediment, and flora and fauna) and applicable regulatory programs (e.g., CWA, CAA, RCRA, CERCLA, various natural resource protection regulations, State implementing regulations, DOE Orders 5400.1 and 5400.5, replacements when promulgated [e.g., 10 CFR 834]), and ensure necessary and sufficient compliance. The program will be integrated with the environmental monitoring programs of the CDPH&E and the Cities of Broomfield and Westminster. In addition, the data management systems of the DOE, CDPH&E, and Cities of Broomfield and Westminster will be integrated to allow access into all systems by all parties (i.e., the DOE, CDPH&E, and Cities of Broomfield and Westminster).

Implementation Strategies and Milestones

The following lists key steps involved in developing integrated monitoring programs and data management systems. Some milestones are also identified.

- Develop, routinely evaluate, and modify as necessary an integrated, multi-media monitoring plan.
- Establish core team with representation from DOE RFFO, 1st and 2nd tier RFETS contractors, CDPH&E, EPA, and the Cities of Broomfield and Westminster.
- Conduct DQO training (3 sessions held: 11/1, 11/2 and 11/28/95).
- Review RFETS existing sampling and analysis programs and historical monitoring data.

kick-off mtg. (held 11/2)

preparation of "white papers" that describe existing RFETS monitoring requirements, programs and their rationale, using one list of necessary descriptors for consistency (completed 11/22)

media-specific meetings (held on 11/29 & 30)

multi-media meetings (held on 11/30)

meetings with representatives from analytical laboratories

- Coordinate with the Action Levels Task Group. Decisions made by this group may impact decisions on monitoring details (e.g., sample locations, analytes, detection limits, frequencies, etc.)
- Complete CDPH&E draft Environmental Monitoring Plan (scheduled for 01/96).
- Establish and document integrated DQOs for all sampling, analysis and QA/QC activities (early '96).
 - development of an integrated decision logic
 - DQO facilitation
 - identification of data needs, including media-specific analytes and detection limits
 - establishment of acceptable levels of uncertainty
- Modify existing sampling and analysis (S&A) programs based on DQOs developed (early '96).
- Integrate existing S&A programs (by 07/01/96); for example:
 - DOE, CDHP&E, and Cities (Broomfield and Westminster) programs
 - surface water and groundwater monitoring programs to comply with CWA, RCRA and CERCLA
 - air monitoring for stack emissions, decontamination and decommissioning activities, and ambient quality, including ComRad program
 - ecological monitoring for ecological clearances, ecological risk assessments, and natural resource damage assessments
- Establish ongoing process to routinely evaluate DQOs and modify program as necessary based on changes in monitoring requirements and/or RFETS operations and conditions (e.g., intermediate and final site closure conditions) (early '96).
- Develop and implement a continuous quality improvement (CQI) process to evaluate and modify the RFETS program (early '96).
- Establish an integrated RFETS data management system for the Site's monitoring program with data warehousing capabilities (FY 96).
 - RFETS to conduct demonstration pilot on data warehousing
 - RFETS to revamp its data management system based on pilot project
- Integrate data management systems of DOE and its contractors, CDPH&E, and the Cities of Broomfield and Westminster (FY96).
 - CDPH&E to complete development of a CDPH&E integrated data management system (03/96)
 - Team members to link individual data systems to meet accessibility objective
- Develop and implement a process to involve stakeholders (early '96). Stakeholders include K-H, DOE, the regulators, the cities, the Citizens Advisory Board, and public interest groups.
 - contact representatives from Broomfield and Westminster (initiated 11/95)
 - presentation of plan at the DOE-State Information Exchange Meeting (11/95 and 01/96)